AGRICULTURAL APPLICATIONS OF WIND ENERGY

1	Course Title:	AGRICULTURAL APPLICATIONS OF WIND ENERGY
2	Course Code:	BSM6019
3	Type of Course:	Optional
4	Level of Course:	Third Cycle
5	Year of Study:	1
6	Semester:	1
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	2.00
9	Practice (hour/week):	2.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ALİ VARDAR
15	Course Lecturers:	YOK
16	Contact information of the Course Coordinator:	e-posta: dravardar@uludag.edu.tr Telefon: 0 224 2941605 Adres: Bursa Uludağ Üniversitesi, Ziraat Fakültesi, Biyosistem Mühendisliği Bölümü, Görükle Kampüsü, 16059, Nilüfer/BURSA
17	Website:	
18	Objective of the Course:	The purpose of this course, the accumulation of information about wind energy from renewable energy sources to create one of the wind energy solutions to energy requirements of different applications and businesses, the information is to provide an effective opportunity to benefit.
19	Contribution of the Course to Professional Development:	The student contributes to the knowledge of wind energy and agricultural applications.
20	Learning Outcomes:	
	1	To understand the importance of the concept of energy
	2	To analyze the characteristics of wind energy
	3	To analyze the wind power can be obtained
	4	The choice for the problem of wind turbines
	5	To understand the mechanics and aerodynamics of wind issues
	6	To develop energy projects to meet the needs of businesses
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21	Course Content:	

Course Content:

Week	Theoretical	Practice
1	Introduction	Lectures on the analysis of expectations
2	The formation of the wind	Homework topics and information given
3	Characteristics of the wind	Calculations with the characteristics of the wind

4	Ability to make the wind work	Calculations related to the ability to make the wind work
5	Wind data analysis methods	Wind data analysis
6	Wind energy conversion	Analysis of wind energy conversions
7	Structural parameters of wind energy	Analysis related to the structural parameters of wind power
8	Wind energy plants	Investigation of wind power plants
9	General Review	Investigation of wind power plants
10	Wind turbine types and characteristics	Investigation of wind power plants
11	Mechanics and aerodynamics of wind	Calculations related to the mechanics and aerodynamics of wind
12	Wind turbine site selection	Wind turbine site selection analysis
13	Methods for the solution to energy needs of businesses focused on wind energy	Project examples
14	General Review	Project examples

22	Textbooks, References and/or Other Materials:	1. Crome H., 2000. Handbuch Windenergie Technik, ökobuch, Staufen bei Freiburg, Germany. 2. Ackermann T., 2009. Güç sistemlerinde Rüzgar, Wiley, Ankara. 3. Hanus B. Ve Stempel U.E., 2011. Das grosse Solar- und Windenergie Werkbuch, Franzis Verlag GmbH, Poing, Germany.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		The effect of the final exam on the course-passing grade is 100%.

24	**ECTS / WORK LOAD TABLE**

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	2.00	28.00
Homeworks	1	50.00	50.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	16.00	16.00
Others	0	0.00	0.00
Final Exams	1	24.00	24.00
Total Work Load			190.00
Total work load/ 30 hr			5.80
ECTS Credit of the Course			6.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	4	3	3	2	3	3	2	3	4	4	2	4	0	0	0	0
ÖK2	4	5	3	4	3	4	2	4	4	4	2	2	0	0	0	0
ÖK3	4	5	3	4	3	4	3	5	4	4	2	3	0	0	0	0
ÖK4	4	5	3	3	3	5	3	5	4	4	2	3	0	0	0	0
ÖK5	5	4	5	3	5	3	2	5	3	5	5	5	0	0	0	0
ÖK6	5	4	5	3	5	3	2	5	3	5	5	5	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**